

no grasses

Lectotypes of the species and varieties described by Blatter and Hallberg in their 'Flora of the Indian Desert'

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E. Blatter and F. Hallberg gave an account of their exploration of the Indian Desert from the neighbourhood of Jodhpur and Jaisalmer in the *Journal*, from 1918 onwards; in their papers they described a number of new species or new varieties. But in general they mentioned several, at times many, specimens as coming under the new taxon, without specifically stating which was the type of their new taxon from among the many specimens cited.

This method of naming new taxa is strongly deprecated by the International Code of Botanical Nomenclature, ed. 1956; Article 7 of the Code lays down: '... the application of names of taxa of the rank of order or below is determined by means of nomenclatural types. A nomenclatural type (*typus*) is that constituent element of a taxon to which the name of the taxon is permanently attached, whether as an accepted name or as a synonym.' Under *Note 3* of the same Article 7, it is stated: 'If no holotype has been indicated by the author who described a taxon, or when the holotype is lost or destroyed, a substitute for it may be chosen, unless its name must already be rejected under this Code. The author who makes this choice must be followed unless his choice is superseded under the provisions of Art. 8. The substitute may be either a *lectotype* or a *neotype*. A lectotype always takes precedence over a neotype. A lectotype is a specimen or other element selected from the original material to serve as nomenclatural type when the holotype was not designated at the time of publication or for so long as it is missing.'

The 1956 edition of the Code lays such emphasis on the type, that under Art. 35 it is stated: 'Publication on or after 1 January 1958 of the name of a new taxon of recent plants of the rank of order or below is valid only when the nomenclatural type is indicated . . .' This means that it is not enough to mention in the original description that the specimen was collected, e.g. in Khandala, by Santapau, on the 15 January 1959, and that the specimen is kept in

Blatter Herbarium, Bombay; categorically it must be stated that the type is e.g. *Santapau* 12560. If the type is not indicated, publication of the new taxon, even if it be done in Latin, is not valid. Recommendation 35 A adds: 'When the nomenclatural type of a new taxon is a specimen, the place where it is permanently conserved should be indicated': this is only a recommendation; the indication of the precise specimen that constitutes the type is not a recommendation, but a categorical rule or order. Many of our Indian botanists do not seem to understand the meaning of this Article 35; this is why I have gone into some details in the matter.

Whilst going through the Rajasthan specimens of Blatter and Hallberg, many of which are preserved in Blatter Herbarium, Bombay, I found most of the sheets on which Blatter and Hallberg based their new species or varieties. In some cases Blatter left lengthy notes with the specimen, showing that his original description was based on that particular specimen. In such cases there is little difficulty about the election of the lectotype; in most cases, however, they left nothing but an indication on the specimen that the plant is a new species or a new variety.

In the following list, I have selected the lectotype in accordance with the provisions of the International Code, after careful consideration of the descriptions given by the authors and examination of all the specimens cited in the original description. A few specimens are not to be found in Blatter Herbarium; their absence cannot be explained except on the supposition that the specimens may in the course of time have been completely damaged and discarded! I have been informed by those who often accompanied Blatter in field expeditions, that the latter did not pay too much attention to careful pressing and preservation of specimens at the time of collection; when preparing the final description of his plants, he did study them carefully, and often remounted them after softening them in hot water. It is possible that some specimens may have been much damaged in the process of softening.

LECTOTYPES OF THE NEW TAXA

1. ***Abutilon indicum* var. *maior*** Blatt. & Hallb. in Journ. Bombay Nat. Hist. Soc. **26**: 226, 1918. Only one specimen is mentioned by the authors, which automatically becomes the holotype; there is no need of selecting a lectotype. The holotype is Blatt. & Hallb. 5644.

2. ***Abutilon fruticosum* var. *chrysocarpa*** Blatt. & Hallb. loc. cit.: 227, 1918. Here again only one specimen was mentioned by the

authors, and this automatically becomes the holotype: *Blatt. & Hallb.* 5660.

3. **Pavonia arabica** var. **glutinosa** Blatt. & Hallb. loc. cit.: 227, 1918. Four specimens are cited by the authors, *Blatt. & Hallb.* 5667, 5668, 5669, 5685. Of these, no. 5669 bears on the label the indication 'var. nov.' with the details 'tota planta cooperta pubescentia viscosa'. This specimen, *Blatt. & Hallb.* 5669, collected in Oct. 1917 at Kailana near Jodhpur, is hereby selected as the lectotype of the variety.

4. **Melhania futteyporensis** Munro var. **maior** (Blatt. & Hallb.) Santapau, comb. nov. *M. tomentosa* Stocks var. *maior* Blatt. & Hallb. loc. cit.: 228, 1918.

Blatter himself in this *Journal* (34: 883, 1931) united *Melhania tomentosa* Stocks with *M. futteyporensis* Munro, following Parker in For. Fl. Punjab 47, 1918. The variety must then be shifted, as it is being done herein.

Blatter and Hallberg mentioned three specimens as their original material, *Blatt. & Hallb.* 7286, 7295, 7296, collected from Barmer near Jodhpur in November 1917. *Blatt. & Hallb.* 7286 is hereby selected as the lectotype of the variety, the specimen being in better condition than the others and showing details of flowers and fruits.

5. **Melhania magnifolia** Blatt. & Hallb. loc. cit.: 228, 1918. Of the three specimens cited by the authors, *Blatt. & Hallb.* 7279, 7280, and 7285, the last, i.e. *Blatt. & Hallb.* 7285 is selected herein as the lectotype, the specimen being the most complete of the set, and agreeing better with the original description.

6. **Psoralea odorata** Blatt. & Hallb. loc. cit.: 238, 1918. Of the four specimens cited by the authors, *Blatt. & Hallb.* 7002-7005, I select 7005 as the lectotype.

7. **Tephrosia multiflora** Blatt. & Hallb. loc. cit.: 239, 1918. Two specimens were cited by the authors, *Blatt. & Hallb.* 6974 and 6975; of these *Blatt. & Hallb.* 6974 is hereby selected as the lectotype; the original sheet bears a lengthy description by the authors, showing that this was the specimen on which their description was mainly based.

8. **Tephrosia incana** var. **horizontalis** Blatt. & Hallb. loc. cit.: 239, 1918.

Two specimens were cited by the authors, *Blatt. & Hallb.* 6976, 6977; of these 6977 bears a detailed description, showing that this

was the original sheet on which the description of the new variety was based. I select *Blatt. & Hallb.* 6977 as the lectotype of the variety *horizontalis*.

9. **Tephrosia petrosa** Blatt. & Hallb. loc. cit.: 239, 1918.

The following specimens were cited in the original description: *Blatt. & Hallb.* 6965-6966, 6968-6973. None of the specimens at present in Blatter Herbarium are in perfect condition, and this is probably due to the hurried way in which they were pressed in the first instance; however, *Blatt. & Hallb.* 6969 is in somewhat better condition than the rest, and is hereby selected as the lectotype of the species.

10. **Alysicarpus monilifer** var. **venosa** Blatt. & Hallb. loc. cit.: 240, 1918.

Two specimens were cited by the authors, *Blatt. & Hallb.* 7225, 7226; of these the latter bears a short typed note giving details of the variety. I select *Blatt. & Hallb.* 7226 as the lectotype of the variety *venosa*.

11. **Rhynchosia rhombifolia** Blatt. & Hallb. loc. cit.: 242, 1918.

Of the three specimens cited by the authors, *Blatt. & Hallb.* 6947, 6948, 6949, only one is preserved in Blatter Herb., no. 6948, which is hereby selected as the lectotype of the species. The sheet in Blatt. Herb. bears the indication 'spec. nov.' in Hallberg's hand, and '*rhombifolia* Blatt. & Hallb.' in Blatter's own hand.

12. **Rhynchosia arenaria** Blatt. & Hallb. loc. cit.: 243, 1918.

Four specimens were cited by the authors, *Blatt. & Hallb.* 6942, 6943, 6945, 6994; none of these specimens shows anything but leaves; the fruits described by the authors seem to have disappeared from the specimens. *Blatt. & Hallb.* 6942 is hereby selected as the lectotype of the species.

13. **Anogeissus rotundifolia** Blatt. & Hallb. loc. cit.: 523, 1919.

Two specimens were cited by the authors, *Blatt. & Hallb.* 6594, 6595, of which only 6594 is preserved in Blatt. Herb. and is hereby selected as the lectotype of the species.

14. **Trianthera decandra** Linn. var. **rubra** (Blatt. & Hallb.) Santapau, comb. nov. *Tr. pentandra* auct. non Linn. var. *rubra* Blatt. & Hallb. loc. cit.: 530, 1919.

The authors cited numerous specimens with the original description; *Blatt. & Hallb.* 6770-6778, 6782-6787; of these *Blatt. & Hallb.* 6772 bears an indication in Hallberg's hand '(Var I n)'; this specimen is hereby selected as the lectotype of the variety.

15. **Trianthema decandra** Linn. var. **flava** (Blatt. & Hallb.) Santapau, comb. nov. *Tr. pentandra* auct. non Linn. var. *flava* Blatt. & Hallb. loc. cit.: 531, 1919.

Two specimens were cited by the authors, *Blatt. & Hallb.* 6788, 6789; both specimens seem to have disappeared from Blatter Herb. The plant is here mentioned to adjust the nomenclature of the same.

16. **Pulicaria rajputanae** Blatt. & Hallb. loc. cit.: 535, 1919.

The following specimens are cited with the original description: *Blatt. & Hallb.* 10039, 10043-10046, 10048-10053. No. 10039 bears a label in the hand of Blatter with a lengthy and detailed description by the same author; this sheet, *Blatt. & Hallb.* 10039, is hereby selected as the lectotype of the species.

17. **Glossocardia setosa** Blatt. & Hallb. loc. cit.: 536, 1919.

Several specimens are cited by the authors, but only one, *Blatt. & Hallb.* 10083, is preserved in Blatt. Herb., identified by Blatter himself; this specimen is hereby selected as the lectotype of the species.

18. **Convolvulus densiflorus** Blatt. & Hallb. loc. cit.: 545, 1919.

Of the three specimens cited by the authors, only *Blatt. & Hallb.* 3515, is preserved in Blatter Herb. and is herein selected as the lectotype of the species. The label on the sheet is in Blatter's hand; at first the plant was identified as *Convolvulus rhyniospermus* Hochst., which identification was corrected by Blatter himself to '*densiflorus* spec. nov.'

19. **Anticharis glandulosa** Aschers. var. **coerulea** Blatt. & Hallb. nom. nud.; cum descriptione hic data a Santapau.

When the original name was published in the *Journ. Bombay Nat. Hist. Soc.* 26: 549, 1919, the authors gave no description of the variety, other than '*var. coerulea var. nov.*'

Here is the description of the variety:

Accedit ad speciem typicam, a qua tamen differt colore coeruleo florum. Typus varietatis a Blatt. & Hallb. nullus lectus est; ideo lectotypus hic a me seligitur *Blatt. & Hallb.* 10284 lectus in loco saxoso ad Jaisalmer mense novembri anni 1917 et positus in Blatt. Herbario.

This variety approaches the typical species in most details, but differs particularly by the blue colour of its flowers. Blatter & Hallberg did not select any type of the variety; a lectotype, *Blatt. & Hallb.* 10284, is herein selected; the specimen was collected on rocky ground near Jaisalmer in November, 1917 and is kept in Blatt. Herb. The variety flowers and fruits in the month of November.

20. ***Aerva pseudo-tomentosa*** Blatt. & Hallb. loc. cit.: 817, 1919.

In Blatter Herb. there is a large number of sheets of the original material on which this species was based by the authors. The sheets are all labelled in Blatter's hand as *Aerua rajputanae* Blatt. & Hallb.; the correct name, however, is the one published in 1919. Blatt. & Hallb. 5962, collected at Jaisalmer in Nov. 1917 is hereby selected as the lectotype of the species.

21. ***Euphorbia jodhpurensis*** Blatt. & Hallb. loc. cit.: 971, 1919.

Only one specimen was cited by the authors in their original description, which thereby becomes the holotype of the species, Blatt. & Hallb. 9228.

REFERENCES

- Blatter, E. & Hallberg, F. (1918-19): The Flora of the Indian Desert (Jodhpur and Jaisalmer). *JBNHS* 26: 218-248, tt. 1-12, 1918; 525-551, tt. 13-25; 811-818, tt. 26-31, 1919.
- Lanjouw, J. et al. (Edit.) (1956): International Code of Botanical Nomenclature adopted by the Eighth International Botanical Congress, Paris, July, 1954. Utrecht, 1956.